



SCIENCE REVIEW ON MCQ EoT 2

	Choose the correct answer
1	The energy of motion is called <u>Kinetic</u> energy.
2	Water has been left in a pot on a hot stove. Bubbles form throughout the liquid and rise to the top. Which type of change is this? A) boiling B) evaporation C) density D) condensation
3	Temperature is a measure of ____ the particles in an object. A) the difference between the potential energy and kinetic energy B) the sum of the potential energy and kinetic energy C) the average potential energy D) the average kinetic energy
4	When a substance is heated, the particles gain energy and move apart, increasing the volume. The mass of the substance being heated _____. A) increases B) decreases C) stays the same D) varies unpredictably
5	When temperature increases, average ____ increases. A) potential energy B) kinetic energy C) gravitational potential energy D) chemical energy
6	Bars of different metals are all heated to 100°C to determine how their volume and length would be affected. Which statement describes the most likely outcome of this experiment? A) All of the volumes change and so do their lengths. B) All of the volumes change, but the lengths remain the same. C) The volumes and lengths do not change. D) All of the volumes change the same amount, and the lengths remain constant.
7	A liquid thermometer works because liquid ____ when warmed. A) expands B) contracts C) solidifies D) condenses.



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8	The combined total of the kinetic and potential energy in a material is called _____. A) radiant energy B) nuclear energy C) chemical energy D) thermal energy
9	When water is heated on a stove, which kind of energy is transferred from the element to the water? A) element energy B) heat energy C) kinetic energy D) thermal energy
10	While a substance is boiling, its temperature _____. A) increases B) decreases C) does not change D) may increase or decrease, depending on the substance
11	Thermal energy can increase even if the average kinetic energy is constant. True False
12	Adding thermal energy to a cup of water may cause the particles to _____. A) move faster B) move closer together C) slow down D) collide less frequently
13	During a hot shower, water vapor fogs up the cooler mirror when it turns to water. This is an example of _____. A) condensation B) deposition C) sublimation D) vaporization
14	Marco put a pot of water on to boil eggs. Half an hour later, he returned to find the pot dry. This is an example of _____. A) condensation B) deposition C) sublimation D) vaporization
15	When two materials that are in contact have the same temperature, the materials are said to be in thermal equilibrium .
16	Heat always moves from Hotter objects to Colder objects.
17	Hot water is poured into a mug and the mug gets hot. This is an example of which type of energy transfer?

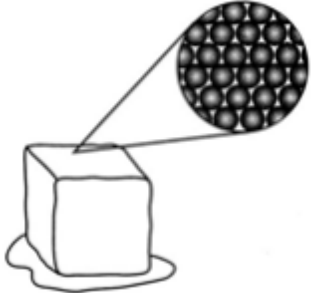


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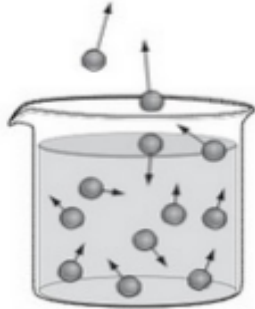
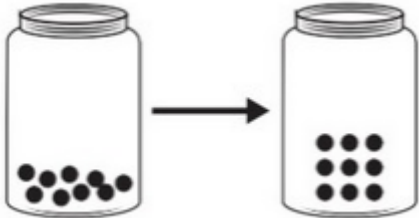
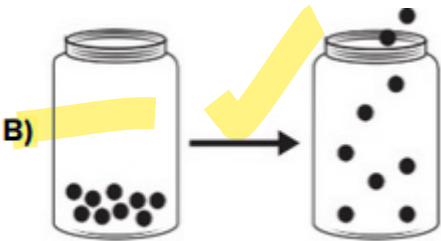
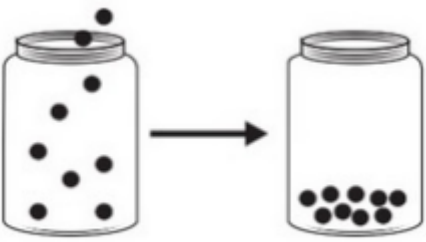
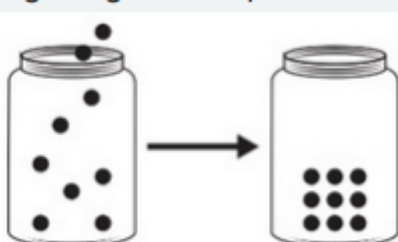
	A) radiation C) convection B) conduction D) This is not an energy transfer
18	Radiation transfers energy by moving matter. True False
19	A hot iron is turned off and cools down to room temperature. The iron cools because _____. A) the iron does not hold heat very well B) the room transfers cold energy to the iron C) thermal energy is transferred from the warm iron to the cooler room D) the thermal energy is destroyed during an interaction with the room
20	Which type of energy transfer allows the Sun to warm Earth? A) conduction B) convection C) radiation D) transmission
21	Which type of energy transfer is responsible for the movement of magma in Earth's interior? A) conduction B) convection C) radiation D) melting
22	The ocean is cold even in summer because water _____. A) has high specific heat B) has low specific heat C) conducts heat well D) is insulated from sunlight
23	The temperature of a piece of iron increases more than that of a sample of water with the same mass when the same amount of thermal energy is added. This is because _____. A) iron has a higher specific heat B) iron has a lower specific heat C) iron has a higher melting point D) water is a liquid and iron is a solid
24	The amount of heat required to raise the temperature of 1 kg of a substance by 1°C is its <u>specific heat.</u>
25	All of the following are good conductors of heat except _____. A) wood B) aluminum C) copper D) silver



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26	A good <u>conductor</u> transfers heat easily.
27	A good <u>insulator</u> <u>does not</u> transfer heat easily.
28	Air is a good conductor of heat. True False
29	What two states of matter are pictured in the image below?  <div><p>A) liquid and gas</p><p>B) gas and solid</p><p>C) solid and liquid</p><p>D) volume and solid</p></div>
30	Forces between particles increase as the particles move faster and farther apart. True False
31	The sum of the potential energy and the kinetic energy of an object is its thermal energy. True False
32	Temperature is the measure of the average kinetic energy of a substance. True False
33	Thermal energy can increase even if the average kinetic energy is constant. True False
34	Adding thermal energy to a cup of water can cause particles to do which of the following? Select all that apply. A) move faster B) get farther apart C) move slower D) remain constant E) get closer together
35	Particle motion in ice is <u>slower</u> than particle motion in water.
36	The molecules in water are farther apart than the molecules in ice. Therefore, the molecules in water have more <u>potential energy</u> than the molecules in ice.
37	The temperature at which a liquid becomes a gas is the ____ point. A) freezing B) boiling C) condensation D) melting

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38	The state of matter of a material depends on its _____. A) density B) temperature C) volume D) weight
39	The evaporation of water is an example of a change in state .
40	<p>A student heats 25 mL of water from 20°C to 96°C in a glass beaker. The model represents the motion of the water molecules during heating.</p>  <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p>a. Explain why some of the water molecules shown in the model have longer arrows than other water molecules.</p> <p>b. Describe what will eventually happen to the water level in the beaker. Explain your reasoning.</p> </div> <p>a. Some of the molecules absorbed more energy than others. b. The water level will decrease as some of the water changes into vapor.</p>
41	A change in the state of matter is caused if enough _____ is added to or removed from an object. A) thermal energy B) kinetic energy C) potential energy D) force
42	During a hot shower, water vapor fogs up the cooler mirror when it turns to water. This is an example of _____. A) condensation B) deposition C) sublimation D) vaporization
43	Marco put a pot of water on to boil eggs. After a few minutes, all the water was gone. This is an example of _____. A) condensation B) deposition C) sublimation D) vaporization
44	<p>Which model best represents a change that results from adding thermal energy to a substance in a jar?</p> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <p>A) </p> </div> <div style="width: 50%;"> <p>B) </p> </div> <div style="width: 50%;"> <p>C) </p> </div> <div style="width: 50%;"> <p>D) </p> </div> </div>



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45	The change in state from a gas to a liquid is called <u>condensation</u> .
46	Snow melts after a snowstorm because of the addition of _____. A) thermal energy B) kinetic energy C) potential energy D) force
47	The amount of force that is exerted on a balloon by the gas inside the balloon is _____. A) temperature B) pressure C) volume D) heat
48	As long as the temperature does not change, as the volume _____ the pressure _____. A) increases, increases B) increases, decreases C) decreases, decreases D) decreases, stays the same
49	As the space in a container gets smaller, the _____ decreases. A) pressure B) temperature C) volume D) heat
50	When a liquid freezes, its particles get _____. This could result from the pressure _____. A) farther apart; decreasing B) closer together; decreasing C) farther apart; increasing D) closer together; increasing
51	Changes in temperature, pressure, and volume affect the behavior of gases more than they affect solids and liquids. True False
52	The measurement of force per unit area is called <u>Pressure</u>
53	A material whose particle composition allows heat and electricity to pass through it easily are described as having a high _____. A) conductivity B) density C) hardness D) weight
54	You can separate the particles that make up sugar from the particles that make up sand because sugar are _____ and sand are not. A) malleable B) ductile C) soluble in water D) acidic



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55	Substances are either elements or mixtures. True False
56	Which properties describe elements that are nonmetal gases? A) composed of an extended structure B) composed of individual atoms or diatomic molecules C) high melting point D) low melting point E) strong attractions between particles F) weak attractions between particles
57	Which of the following would be modeled by small particles made up of atoms of two kinds of elements? A) gold B) oxygen C) neon D) water
58	Which is a property of metals as a result of their extended structures of atoms? A) are poor conductors of electricity B) dissolve in water C) have low melting points D) can be hammered into sheets
59	A substance has an extended structure composed of two different elements. The elements are a metal and a nonmetal. Which property would this substance most likely have? A) can be hammered into sheets B) has a high melting point C) does not dissolve in water D) is a gas at room temperature
60	Why does oil not dissolve in water? A) Oil is an extended structure, and water is made of polar molecules. B) Oil is an extended structure, and water is made of nonpolar molecules. C) Oil is made of nonpolar molecules, and water is made of polar molecules. D) Oil is made of polar molecules, and water is made of nonpolar molecules.